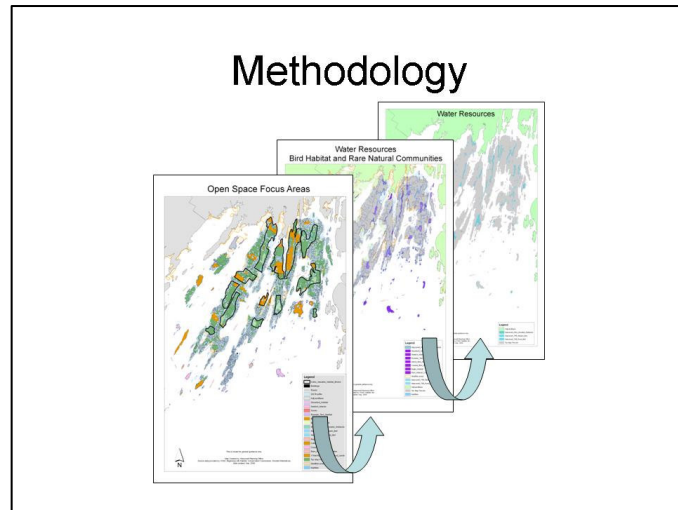


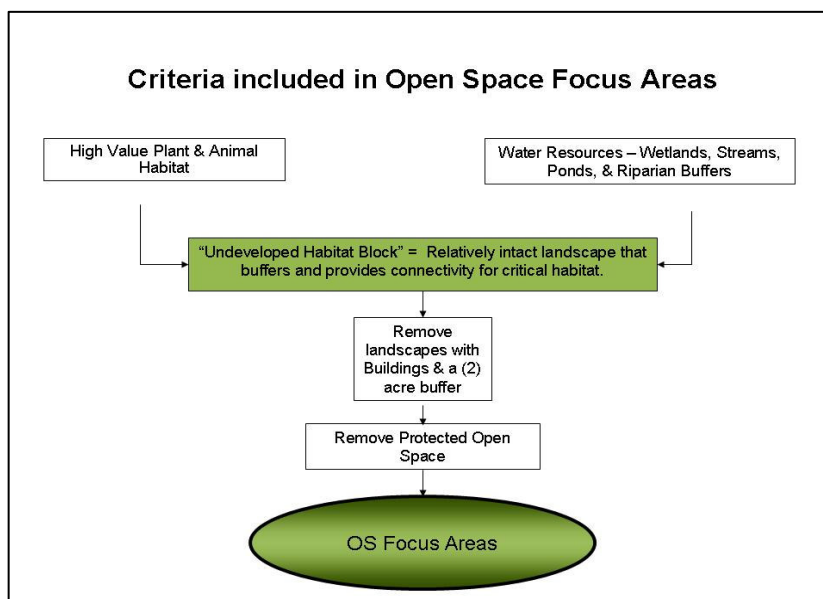
5B. Identification of High Value Areas of Open Space

In order to identify the large uninhabited areas to preserve for open space, maps from the Maine Natural Areas and Beginning with Habitat Programs were used to determine the location of Harpswell's natural habitat and water resources. (See **Appendix 4**) Tax maps and the *Inventory of Protected Land in Harpswell* were used to identify the location of scenic, civic, cultural, historic and recreational resources. (See **Maps 3,4,5 and 6 and Appendix 15** for more details about the methodology).



This information, coupled with local knowledge, was used to select Focus Areas for preservation of Harpswell's largest high value areas. In addition, the following criteria were used in the selection:

- Limited or no current development in the area
- Size of area with priority given to larger areas, including blocks of undeveloped land over 20 acres in size
- Connectivity of the land to existing preserved and undeveloped land or wildlife habitat
- Existence of permanently protected land and land with limited protection in the area
- Equity in the distribution of open space in all major areas within the town
- Public input



In addition, Harpswell Islands **over one acre in size**, are high value areas and, therefore, priority for open space preservation. Island ecology is fragile by nature and easily destroyed so it is important that their natural areas are preserved because:

- The undeveloped areas provide important wildlife habitat for nesting waterfowl, birds and animals with minimal human disturbance.
- Thirty of our islands have been identified by the Maine Dept of Inland Fisheries and Wildlife as important sea bird nesting islands and have been zoned for Resource Protection.
- The bald eagle and roseate tern, threatened species, nest on Harpswell Islands.
- Many are surrounded by healthy clam flats that benefit from their undeveloped state.
- They provide both a location for outdoor recreation and picturesque views from the mainland.



5C. What Is a Focus Area?

Based on the above criteria, as well as local knowledge of Harpswell, the Harpswell Conservation Commission selected **12 Focus Areas**, which contain high value land to protect. The resources contained in each **Focus Area** are described in **Appendix 16** and shown in **Map 6**.

In general, the **Focus Areas** contain large open areas of land that include the water resources necessary to ensure the marine ecology and preserve the health of the fishing industry. The areas also include high value habitat critical to federally endangered, threatened and migratory birds that visit or nest in Harpswell and its islands and high value plant and animal species. In addition to these 12 Focus Areas, **Harpswell's islands**, especially those with nesting habitat and access for recreation, should be preserved for open space.

Each of the 12 Focus Areas was chosen for a variety of the above reasons and specific circumstances listed below. (Please see **Appendix 16** for details.)

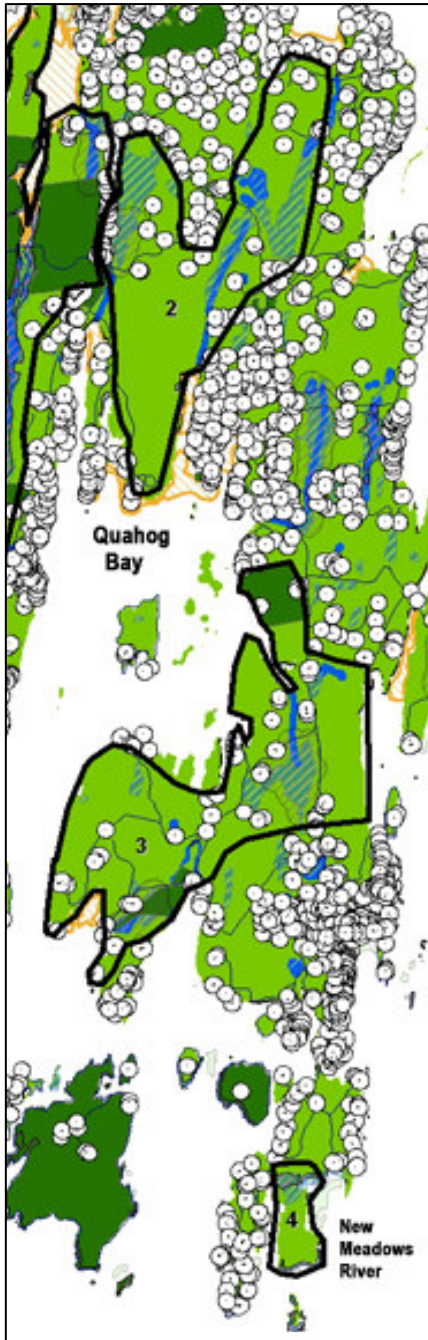
Focus Area 1: Long Reach, Great Island

The Long Reach-Long Marsh area on Great Island includes:

- Long Marsh, an important State protected salt marsh
- Three coastal wetlands
- One freshwater wetland
- One coastal floodplain
- A cove with clam flats



- State and HHLT conserved land
- The Town Cliff Trail and Long Reach Preserve Trail
- High value wildlife habitat and nesting areas for rare, endangered and threatened species.
- The largest undeveloped corridor of open space in Harpswell



Focus Area 2: Brickyard Watershed, Great Island

The area of Brickyard Cove and Cranberry Horn Hill to Cundy's Harbor Road features:

- Two freshwater wetlands which protect upper Quahog Bay
- One Freshwater wetland flowing into the New Meadows River
- Valuable for the interspersed wetland types
- High value habitat for tidal waterfowl and wading birds.

Focus Area 3: Bethel Point, Cundy's Harbor

The southeast Quahog Bay/Hen Cove area includes:

- Two freshwater wetlands which protect Quahog Bay and its marine ecosystem.
- Significant inland and tidal habitat for waterfowl and wading birds.
- Good interspersed feeding and breeding habitat and migratory staging area.
- Provides a significant corridor for wildlife.

Focus Area 4: Sandy Cove, East Cundy's Point

The Sandy Cove area on East Cundy's Point includes:

- One coastal marsh which is part of the 100 year floodplain.
- Sandy Cove Beach which should be preserved for recreation and hiking
- High value habitat for tidal waterfowl/wading birds
- Historic location of salt farm and ice production

Focus Area 5: Ice Pond, Gun and Long Points, Great Island



- Located between Gun Point and Long Point this area has:
- The only Great Pond in Harpswell and is in a 100 year floodplain
- Potential for recreation and public access
- High value tidal habitat for waterfowl and wading birds.
- Historic site for ice production

Focus Area 6: Wilson's Pond Orr's Island

The area includes :

- Wilson's Pond,
- An important freshwater wetland
- Significant inland habitat for waterfowl and wading birds
- One of our few freshwater marshes.
- The largest undeveloped area of open space on Orr's Island.



Focus Area 7: Cedar Beach, Bailey Island



Cedar Beach is important because:

- It is an important recreational resource for the area.
- A high value habitat for tidal waterfowl and wading birds

Focus Area 8: Otter Brook Corridor, North Harpswell



The corridor between Mill and Harpswell Cove includes

- Three coastal marsh wetlands
- Two freshwater wetlands
- Otter Brook
- Two miles of undeveloped and connected land
- Important shell fish habitat
- Valuable habitat for tidal waterfowl and wading birds

Focus Area 9: Wilson & Widgeon Coves, Harpswell Neck

The area between Wilson and Widgeon Coves includes:

- The historic Dunning Farm and HHLT property at Lookout Lot
- The coastal marsh in Widgeon Cove
- High value tidal wildlife habitat for waterfowl and wading birds.
- Saltmarsh for pin tail ducks
- Potential of 250 acres of undeveloped land with wildlife corridor and connection of two coves

Focus Area 10: Lookout Point, Harpswell Neck

The corridor between Lookout Point and Stocurro Drive features:

- One freshwater wetland
- HHLT protected Hackett land
- The largest undeveloped habitat near Harpswell Center containing up to 200 connected acres
- Significant wildlife habitat for tidal waterfowl/wading birds and shorebird feeding and roosting.



Focus Area 11. Allen Point Road Corridor, Harpswell Neck



Features:

- One freshwater wetland which drains into Harpswell Sound and influences clam flats
- Small pond containing a dry hydrant, across from the Harpswell Post Office.
- Significant tidal wildlife habitat for waterfowl and wading birds
- Provides shellfish habitat

Focus Area 12 Basin Cove, South Harpswell

The Basin Cove to Curtis Cove area contains:

- Undeveloped area along Basin Cove of about 80 acres
- A high value pond on right of Basin Cove Road
- A scenic area
- Only remaining undeveloped habitat in South Harpswell
- High value habitat, including significant habitat for tidal waterfowl and wading birds

Islands



Our islands are important wildlife habitat, especially for nesting waterfowl. Thirty of our 83 islands have been identified by the Maine Dept of Inland Fisheries and Wildlife as important sea bird nesting islands. Many are surrounded by clam flats that benefit from the fact that the islands are not developed.

- Most have large undeveloped areas on them
- They all provide scenic views from the mainland of Harpswell
- The islands that have been preserved to date by HHLT and other conservation groups provide recreational opportunities

These 12 Focus Areas and the undeveloped islands are the open spaces in Harpswell which are the most important to preserve because of their ecological and economic value. These areas should be at the center of Harpswell's future open space protection efforts. Currently,

the Focus Areas and most of the islands have **limited development**. Some of the land in these areas is already **permanently protected** or has **limited protection** from development. Most of the land is **privately owned** by conservation minded residents living in the area who have kept it in its current undeveloped condition.

The role of the Town will be to work with the landowners in the Focus Areas and on the islands to acquaint them with policies and practices that allow them to maintain their property in an undeveloped state, or if developing, siting their land to protect water resources and valuable habitat. Strategies are discussed in the following section.

6. Open Space Protection Strategies

In order to protect the open space in the Focus Areas, the Harpswell Conservation Commission (HCC) researched and chose **five strategies** or tools to be used to preserve the high value land in these areas. The HCC suggests that the Town use the following tools to preserve Harpswell's existing open space in the short term and into the future:

- preservation of water resources
- voluntary efforts to preserve open space
- voluntary efforts to protect existing conservation land
- the addition of a definition of open space to our land use regulations
- strategic land acquisition.

These strategies are intended to be used primarily in the Focus Areas. Many of them however can and should be used in other parts of Harpswell to preserve open space. A Summary of Open Space Protection Strategies follows.

Summary of Open Space Protection Strategies		
Strategy	Activity	Priority Audience
Protection of Water Resources	1. Map and protect vernal pools	All Residents
	2. Update wetland protection of four wetlands	Focus Area Residents
Voluntary Efforts for Open Space	1. Provide conservation education	Focus Area Residents
	2. Develop stewardship agreements, conservation leases and conservation easements in cooperation with the HHLT or other land trusts	Focus Area Residents
	3. Encourage voluntary use of private land by neighbors	All Residents
	4. Increase current use tax programs	All Residents
	5. Increase access to water with parking	All Residents
Efforts to Preserve Protected Land	1. Preserve selected town lands for conservation	All Residents
	2. Increase non-motorized boat landings	All Residents
	3. Promote use of Town land	All Residents
	4. Encourage and document use of State land	All Residents
	5. Contact civic and education groups re Plan	Civic and education groups
	6. Explore protection of historic properties	Harpswell Historic Society
Land Use Regulations	1. Add open space definition to ordinance addendum	Planning Board, CPIC
	2. Appoint committee to study ordinances	Planning Board, CPIC
	3. Develop a new scenic methodology and use to update the scenic map	Planning Board
Strategic Land Acquisition	1. Identify and evaluate potential land to purchase	All Residents
	2. Obtain funding	All Residents
	3. Purchase land from willing sellers	Focus Area Residents
	4. Provide stewardship of property	All Residents

6A. Protection of Water Resources: Vernal Pools and Wetlands

1. Map Vernal Pools

Vernal pools and their uplands play a crucial role in plant and animal ecosystems.¹⁰ A vernal pool provides the primary breeding habitat for wood frogs and salamanders. Due to their ephemeral nature, their small size and the fact that they are home to nocturnal feeding species, vernal pools have often slipped through the regulatory cracks. As of September 1, 2007, vernal pools identified as *significant vernal pool*¹¹ habitat are protected by law by the Natural Resources Protection Act, (§38MRS 480-B). (Please see **Appendix 3** for more detail.)

Our vernal pools are fragile water bodies which are an important wetland resource for the following reasons.

- Vernal pools are important to our local ecosystem and the entire animal and insect food chain.
- Vernal pools provide breeding habitats with plants, vertebrates and invertebrates, birds, reptiles, amphibians and mammals, as well as migratory birds and an increasing number of threatened species.
- They contribute to the local biodiversity.
- Amphibians are breeding indicator species that detect environmental hazards, which have the potential to pollute ground and other water bodies.
- Where located near wetlands, these special aquatic sites contribute to cleansing the surrounding water.

As Harpswell continues to develop, it is important to locate and protect the *significant vernal pools* in our town. The HCC recommends that the Town¹² identify and map the significant vernal pools in town and provide education to the public about the ecological significance of these pools.

2. Update Wetland Protection

Wetlands are essential for the health of our water supply and marine economy. The Town currently has 27 wetlands zoned for resource protection. The Conservation Commission supports the existing resource protection zoning and recommends that four wetlands, currently zoned as Shoreline Residential,¹³ should be reclassified under Resource

¹⁰ An ecosystem is a natural system consisting of plants, animals and microorganisms in an area that function together with all of the non-living factors of the environment.

¹¹ Significant vernal pools are defined in Maine as having (1) a state listed threatened or endangered species using it for an important part of its life history and/or (2) there is a notable abundance of vernal pool species, such as blue spotted salamander, wood frog or fairy shrimp.

¹² The Town should be responsible for the mapping. In the future, property owners who sell property will be required by State law to survey their land to identify vernal pools. As a result, a Town survey will save money for residents who sell their property.

¹³ The Shoreland Residential District includes those areas suitable for residential and recreational development. The Resource Protection District includes areas in which development would adversely affect water quality, productive habitat, biological ecosystems, or scenic and natural values.

Protection. (Please see **Appendix 17** for details and **Appendix 18** for a summary of wetland mitigation.)

6B. Voluntary Efforts Available to Preserve Open Space

The ability of property owners to preserve open space while having continued use of their land is a powerful tool to open space protection. In order to preserve open space in the Focus Areas, the participation of property owners should be sought and encouraged. Their voluntary participation will enhance the effectiveness of the town open space program and will increase connectivity between open spaces. Efforts to preserve open space, with priority given to land in the Focus Areas, would include: 1) conservation education, 2) voluntary stewardship and land conservation 3) the use of tax incentive programs, 4) ways to increase access to the water and 5) voluntary use of private land by neighbors.. The Conservation Commission recommends that the Town explore the following voluntary strategies to preserve high priority open space.

1. Conservation Education

A program to develop ongoing education on critical habitat preservation should be developed for landowners in Harpswell, especially those who have property in the Focus Areas. The materials should include information on the value of upland habitat, wetland protection; and sound land management practices, such as, managing drainage problems, maintaining a vegetated buffer around sensitive water resources or natural habitats and encouraging minimal residential use of chemicals on lawns abutting water bodies.

2. Stewardship, Conservation Leases and Conservation Easements

Voluntary **stewardship agreements** between the Town and residents, especially those in the Focus Areas, would encourage landowners to preserve important undeveloped open space land. If the property owner were willing, the agreement could include limited public access to the land for selected outdoor recreational activities. An open space implementation committee would develop guidelines regarding the process and content of these guidelines.

Another possible way to preserve large parcels of undeveloped land would be to develop a **conservation lease**¹⁴ with the owner. Large parcels of land are undeveloped because past and current owners assume some level of stewardship of their land. The Town could encourage landowners to continue that stewardship by leasing development rights to the land. It would allow the Town to enter into a lease contract with a landowner for keeping his/her land undeveloped. The amount of the contract payment could be related to the amount the land is taxed for real estate purposes and the length of the contract, which would likely be at least 10-15 years and possibly more. Please see **Appendix 19** for the details.

Landowners who live in the Focus Areas could also be encouraged to put **conservation easements** on their land to preserve a portion of their land in a natural state. The easements

¹⁴ This concept was developed for and found in the Casco Open Space Plan.

could be held by Harpswell Heritage Land Trust or other land trusts, such as the Maine Coast Heritage Trust and The Nature Conservancy.

3. Current Use Tax Incentive Programs

As a means of encouraging open space preservation, the State of Maine has established Current Use Programs, which offer property owners a reduction in the assessed value of their land for tree growth, farm land, open space¹⁵ and/or working waterfront. All of these programs are available to property owners through an application process with the Town.¹⁶ A list of these programs and a description of Harpswell's current participation in these programs can be found in **Appendix 20**. The Conservation Commission should find additional ways to let residents know about these programs, especially people who reside in the Focus Areas.

Currently, a forty-foot setback exists along State roads. The Town of Harpswell should explore the idea of encouraging residents to maintain an undeveloped natural area along State roads of at least 75 feet. which may be eligible for the open space tax reduction program, if all other open space requirements are met.

4. Increased Access to the Water

Many of the Town Landings and beaches need additional parking to increase access to the water. The HCC recommends that the Town consider ways to increase parking in selected locations.

5. Voluntary Use of Private Land by Neighbors

In order to ensure the connection between pieces of land, the HCC recommends that the Town encourage private land owners to preserve or allow **rights of way or paths** over their land which connect to other common lands. For generations, paths on private property have been used by neighbors without shore access and clambers and fishermen to have access to the water. A program might be developed that would encourage landowners to allow continued **use of historic paths** to the water. These could include education and documentation for public use of these historic paths.

6C. Efforts to Preserve Existing Conservation Land

The Town, the State and several civic and historic organization have partially protected the use of selected open space and cultural and historic sites in Harpswell. In order to protect these community resources further, especially those in the Focus Areas, the Harpswell Conservation Commission recommends the following strategies.

1. Town Lands

¹⁵ The Open Space tax classification provides incremental tax savings up to 95% as follows: ordinary open space 20%; permanently protected 50%; forever wild 70%; and public access 95% reduction.

¹⁶ The Town's Assessing Department already informs residents about the use of these programs through its website (<http://www.harpswell.maine.gov>).

The Town of Harpswell currently has 389 acres of land with limited protection from development, some of which is in the Focus Areas. The HCC recommends that the Town promote the use of Town Lands for recreation and consider designating some of its land, especially land in the Focus Areas, for permanent conservation.

a. Preservation of Selected Town Lands for Conservation: The Town should explore the possibility of preserving some of the Town lands as conservation land. In order to decide which lands to preserve and do the work involved in preserving them, Representatives of the Town Lands Committee and Conservation Committee could form a *conservation lands subcommittee* to prepare a suggested list of potential town lands to put under conservation easement or a declaration of trust. Priority should be given to Town landings that allow public access to the water; Town lands that have a significant number of acres that support habitat and permit recreation; and Town islands with nesting habitat. A vote at Town Meeting would be needed to specify the use of selected land for permanent conservation. Please see **Appendix 21** for suggestions regarding which Town Lands should be preserved as open space.

b. Expansion of Non-motorized Boat Landings: The HCC supports the Recreation and Town Lands Committees' interest in identifying locations in Harpswell for public carry-in and carry-out landings for small boats, such as kayaks and canoes.

c. Promotion of the Use of Town Property: The HCC suggests a coordinated program be developed by the various land use committees to inform the residents about *Open Space, Town Landings and Trails in Harpswell*. This information could contain a map and listing of trails, Town Landings and recreational spots.

2. State Lands

The State of Maine owns 393 acres of land in Harpswell, most of which is in the Focus Areas and available to the public for recreation. State land can be used in mitigation trades; therefore, the Town should do what it can to protect these lands. In order to protect our State lands located in Harpswell, the Town should do the following:

a. Document the Use of State Land: The Town should document the public use of these lands and educate residents about their availability.¹⁷ The more these properties are used by the public, the less chance they have of being converted to other uses.

¹⁷ In order to protect the state properties on Allen Point Road/Clark Cove (Lots 011-061 and 011-065), the Town should explore ways to ensure public access to these two properties and document their use. The current trails on the properties are overgrown and need maintenance.

b. Maintain a Relationship with State: As needed, the Town should make State legislators aware of the importance of State lands to Harpswell for habitat and recreation uses. In order to do this education about the status of each State property, information on the public use of the property should be compiled. This information should be retained in the Codes Office in each property's file, making it readily accessible when needed.

3. Civic and Educational Groups

Many of the civic lands in town are buildings and small pieces of land. Cemeteries, however, are important historically and culturally. The HCC supports efforts to preserve these ties to community. The Town could check into the laws that protect cemeteries from development in Maine and review the deeds of the existing cemeteries so that they are better and more accurately recorded in town records.

Bowdoin College owns 124 acres of undeveloped land known as The Thalheimer Farm and Wyer Island on Orr's Island. Currently it is the home of the Environmental Studies Program used for research and education. It also contains several trails for public use. The HCC should contact the college to acquaint it with Harpswell's Open Space Plan and discuss how long term protection of this property is an important piece of the Open Space Plan.

4. Historic Properties

The HCC supports the efforts of the Harpswell Historical Society to protect the Town's historical buildings and properties. Harpswell has 13 properties that are listed on the National Register of Historic Places. (See **Appendix 7B**) One of these properties, The Auburn Colony, is a Historic District. In addition, we have a number of other historic buildings and 32 Maine Historic Preservation Commission historic archaeological sites. All contribute to the character of Harpswell. The Town may want to explore protecting some of the historic buildings and sites that it owns by placing an easement or a deed restriction to their use.

6D. Land Use Regulations

The Harpswell Conservation Commission was asked by the CPIC to prepare an analysis of how existing land use ordinances impact on open space and what new ordinances might be considered to protect open space. The HCC did this analysis and concluded that changes are needed in the existing ordinances to protect open space. However, the HCC does not have the mandate or expertise to make these changes. As a result, the HCC recommends that the Town appoint a committee or hire a consultant to do this work. The ideas outlined in **Appendix 22** can be used as a starting point for this task.

During its analysis of the impact of land use regulations on open space, the HCC discovered that the Town does not have a definition of open space in its Land Use Ordinances. The HCC recommends that in order to eliminate confusion or ambiguity, a uniform **definition** of “open space” be added to the Harpswell’s Ordinances Definitions Addendum as follows:

***Open space**, also known as natural areas or green space, is an area of land in a predominantly undeveloped condition. It can include forests, fields, wetlands and/or water bodies. Open space can be improved land, such as a ball field or cemetery, or unimproved land, such as a wildlife preserve or other natural area, or just an undeveloped parcel of land. Open space land may be preserved, enhanced, or restored in order to maintain or improve the natural scenic, ecological, cultural, hydrological or geological values of the land.*

In addition to reviewing and updating the land use regulations, the HCC recommends that the revised Scenic Views Map of Harpswell (**Map 8**) be updated. The methodology that was used to prepare the 1987 (see **Map 1**) and the updated 2007 map (see **Map 8**) focused on scenic views from roads and a few other sites. The HCC recommends using the revised Map 8 until a new scenic rating system using the guidelines defined by the Maine State Planning Office in 2007 is implemented. Please see **Appendix 6A** for details of this new methodology.

6E. Strategic Land Acquisition

An important way in which the Town can preserve high priority open space is by the strategic acquisition of selected land. Prior to purchase, the Town will need to determine if the land is within the focus areas of Harpswell, and therefore of strategic importance for preservation as open space. Please see **Appendix 15** for a methodology for assessing open spaces and **Appendix 16** for a list of recommended focus areas.

The main mechanism to acquire land is to **purchase the land at fair market value from willing sellers**. The Town may also acquire property occasionally through donations of land, the transfer of development rights and forfeiture of property due to non payment of taxes.

Any land that is acquired by the Town will require stewardship¹⁸ which requires both labor and money. Therefore, resources will need to be set aside for both the purchase of land and

¹⁸ Stewardship is the practice of carefully managing land use to insure natural systems are maintained or enhanced for future generations. *Land Stewardship Resource Center*.

its maintenance. The Town's capital reserve account could be used to hold funds for the purchase of land¹⁹.

The Town can fund the purchase of open space from three major sources. The first is local funding, such as municipal bonds, appropriations and donations. The second is through state and federal sources and the third through private sources, such as individual donations and foundations. Please see **Appendices 23A, 23B and 23C** for more detailed information on sources of funding.

7. Recommendations for Implementation and Conclusion

The residents of Harpswell need to decide which of the strategies discussed in Section 6 should be implemented to protect open space in Harpswell, especially in the Focus Areas. In order to decide on the best strategies and develop a detailed Implementation Plan, the Conservation Commission recommends a four-stage implementation process:

- **Review and Approve the Open Space Plan:** The Open Space Plan will be presented to Town Committees, the Selectmen and the public for input and voted on at the March 2009 Town Meeting.
- **Appoint an Open Space Implementation Committee:** The Committee should be responsible for the implementation of the Open Space Plan in collaboration with the Town Planner and the appropriate town committees. The Conservation Commission could be this committee.
- **Implement Voluntary Strategies:** The Town of Harpswell should (1) map vernal pools and update the wetland protection; 2) work with landowners to implement voluntary programs to preserve open space; and 3) explore voluntary efforts to protect existing protected land.
- **Explore Land Regulation and Land Acquisition:** The Town should 1) update land use regulations that impact on open space, including the definition of open space and 2) examine the possibility of purchasing land in the Focus Areas in collaboration with the local land trust (HHLT).

As a result of the implementation of this Open Space Plan, we hope to achieve our shared **vision** for the Town of Harpswell that:

- The key open spaces that make Harpswell a desirable place to live and give it its quality of place will be conserved for future generations to enjoy and appreciate.
- The quality of its groundwater, bays, rivers, ponds, vernal pools and wetlands will be preserved in healthy condition for future generations.

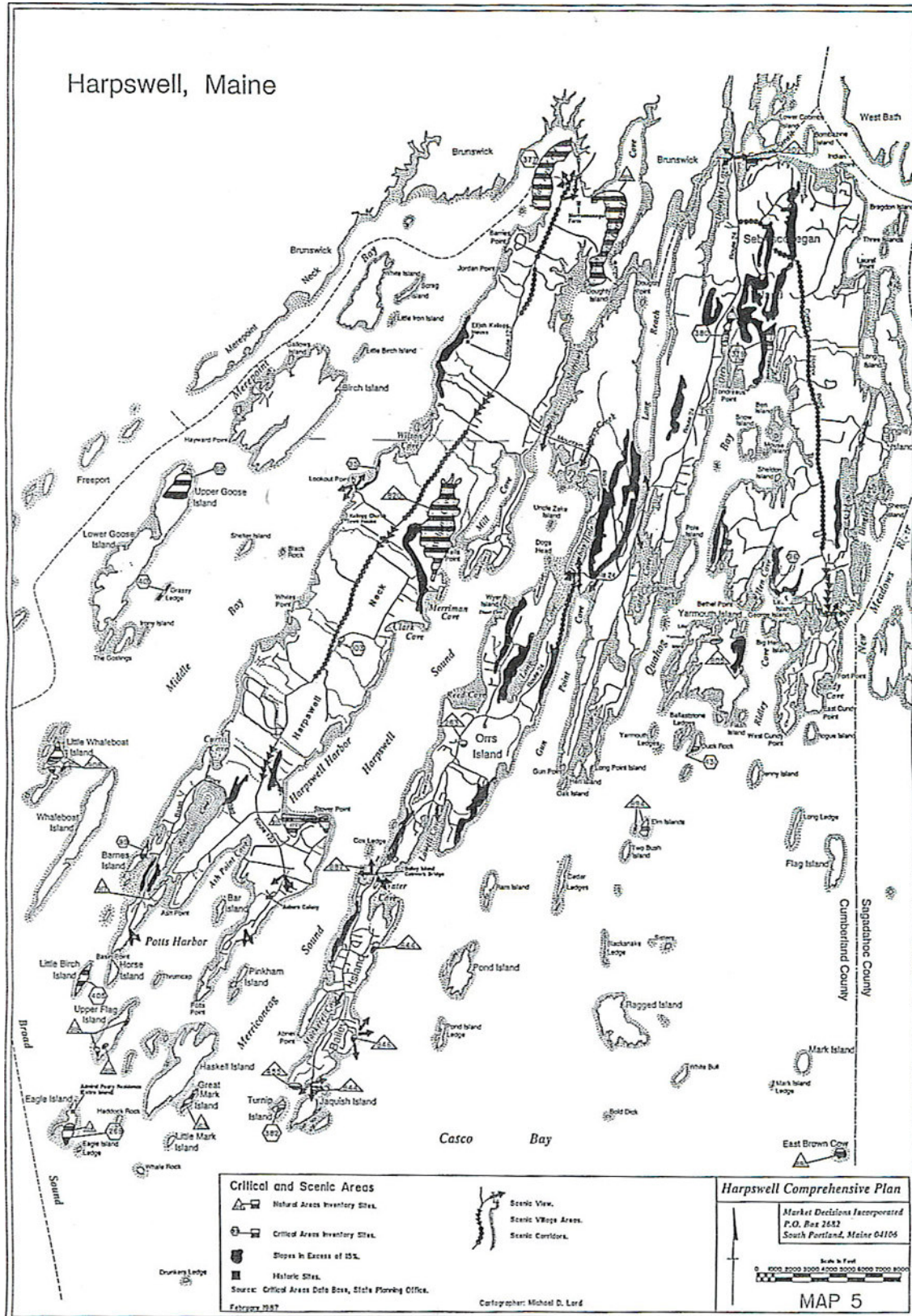
¹⁹ Capital reserve account set up to hold money for the purpose of acquiring land at the March 11, 2000 Town Meeting.

- The animals, birds and other wildlife will continue to have habitat in which to live and prosper.
- The character of Harpswell will continue to be defined by the Town's coastal, small town; rural to village pattern; and its natural, cultural, scenic and recreational assets.
- New residential development will preserve the natural features of the land, provide buffers along our roads, wetlands, streams and shoreline, include open space, and allow for public access.
- Community organizations, town government, landowners, developers, and the public will work together collaboratively to plan for, protect and manage the open space resources of the town.



MAPS

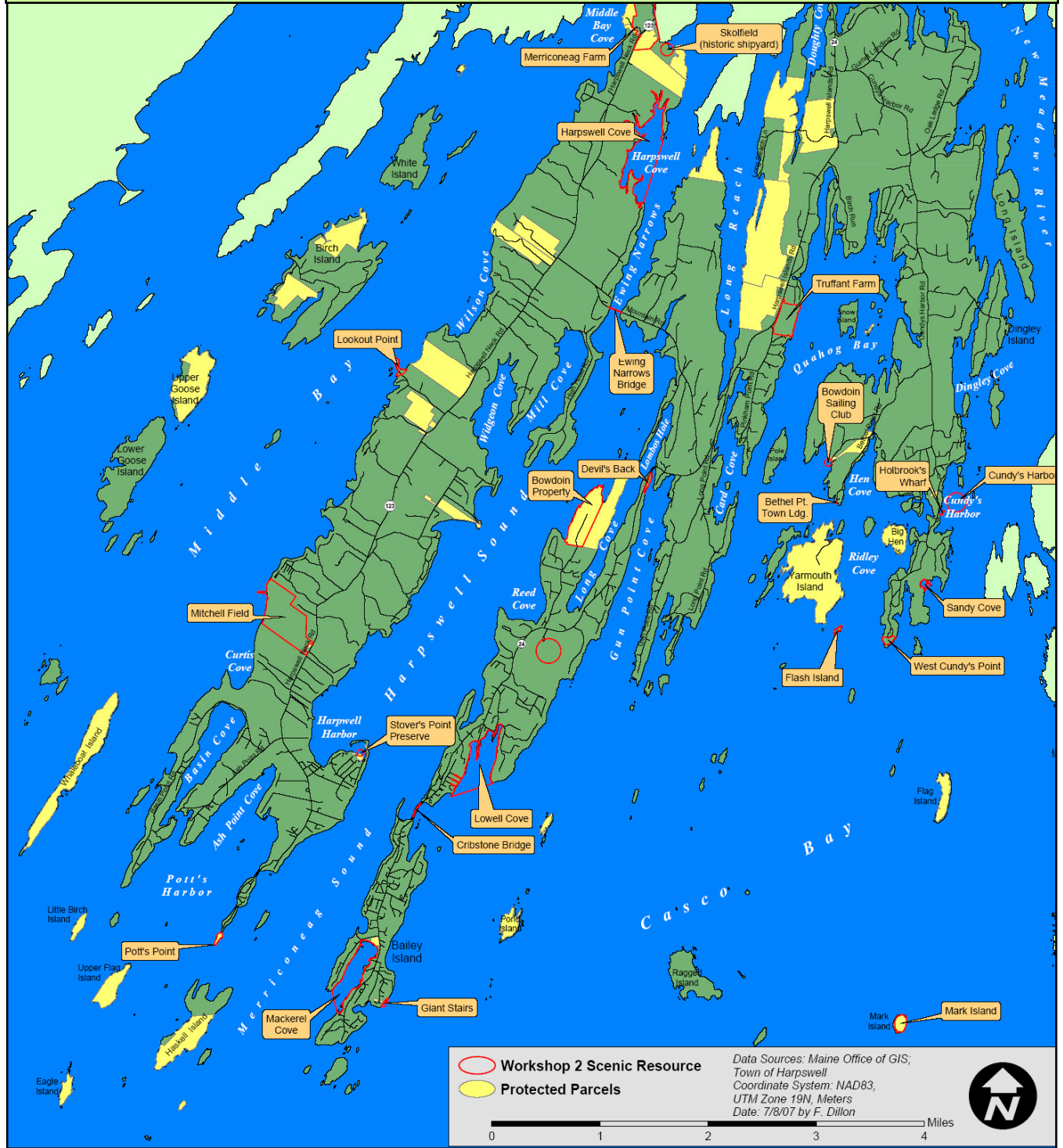
Map 1 – 1987 Scenic Areas Map



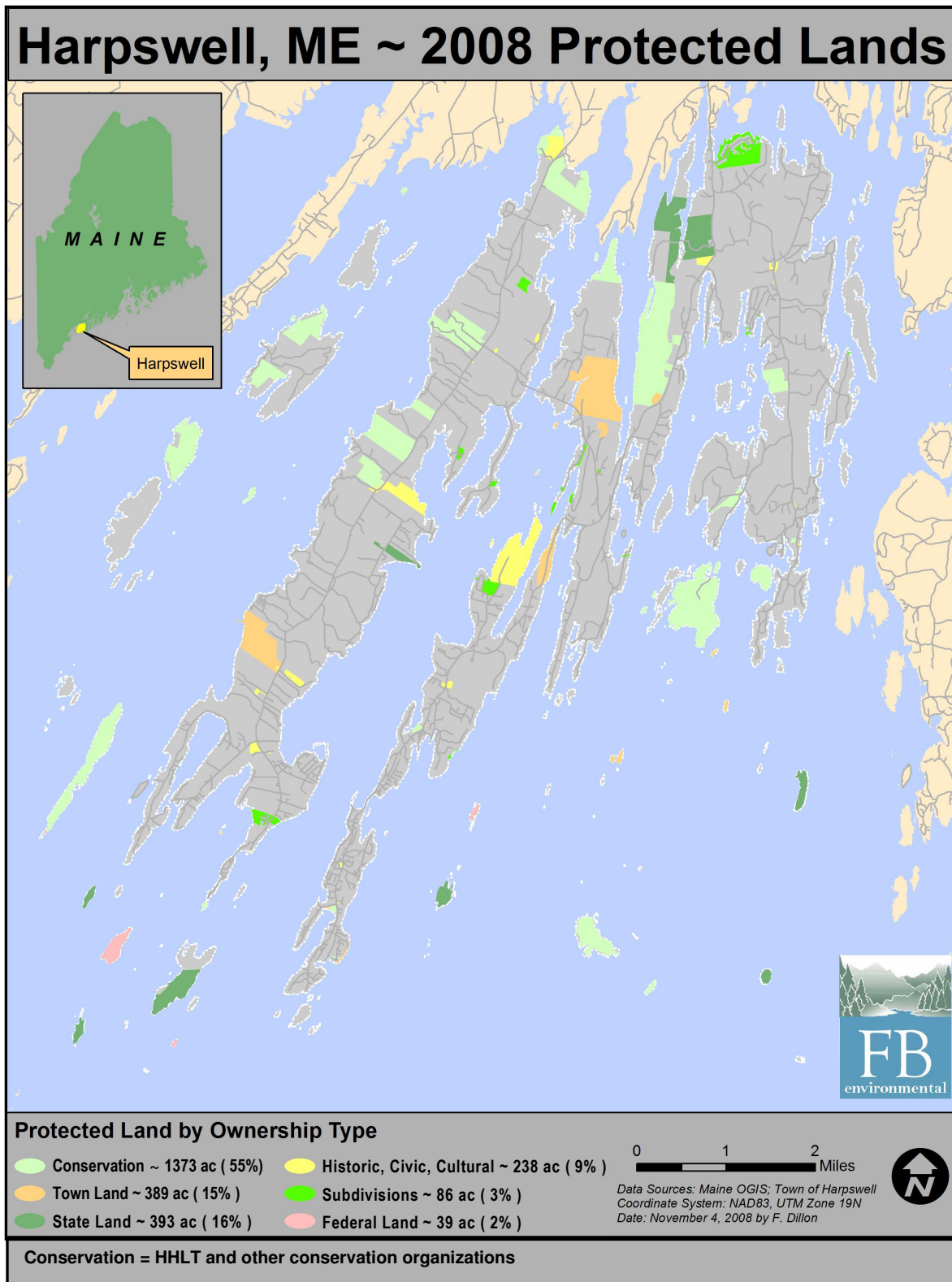
Map 2 - Scenic Resources Identified in Workshop 2

By workshop Participants, Summer 2007

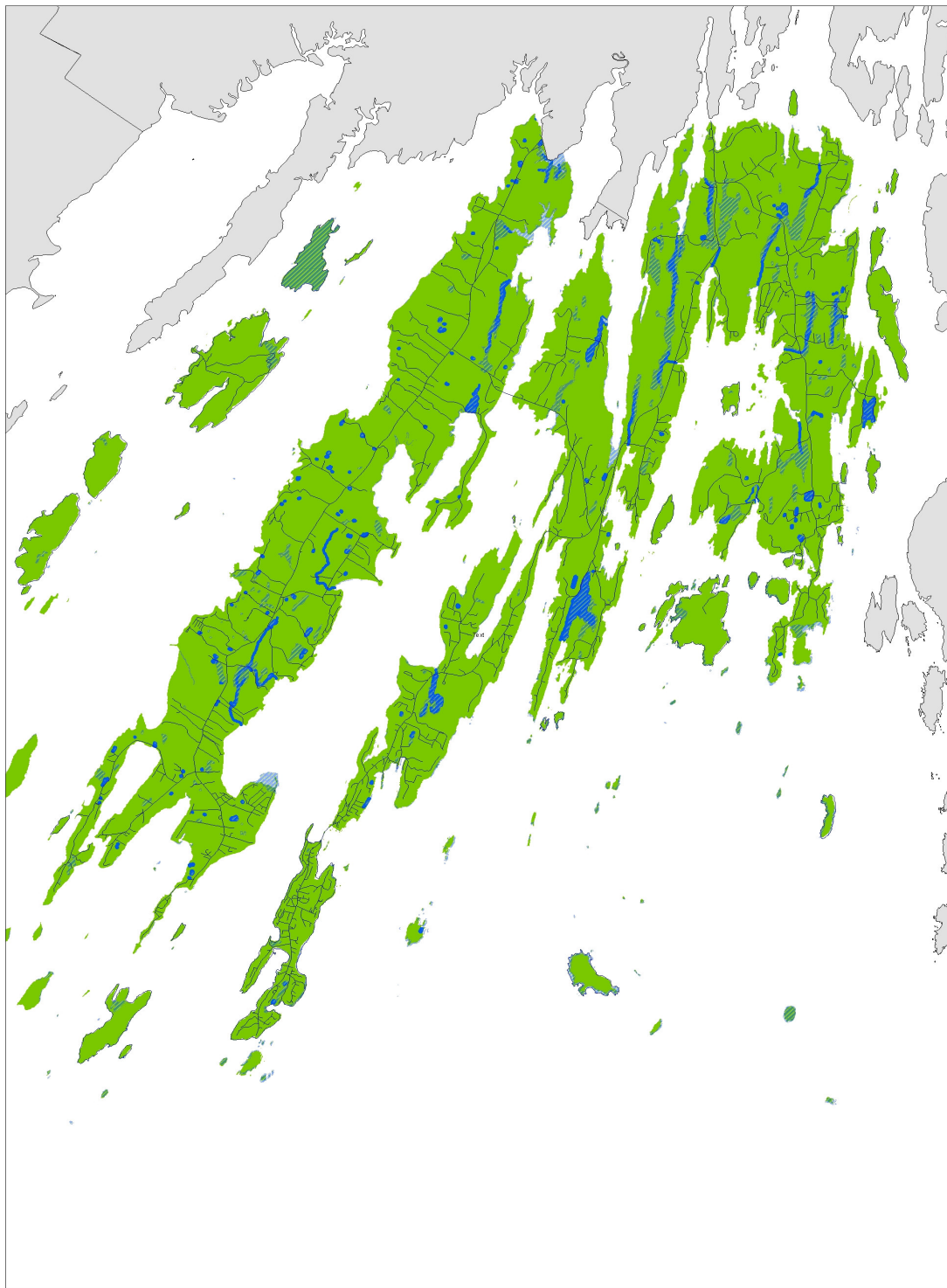
(Note: missing HHLT Easements=Houghton Graves Park, Brown Woods, Shelter Island)



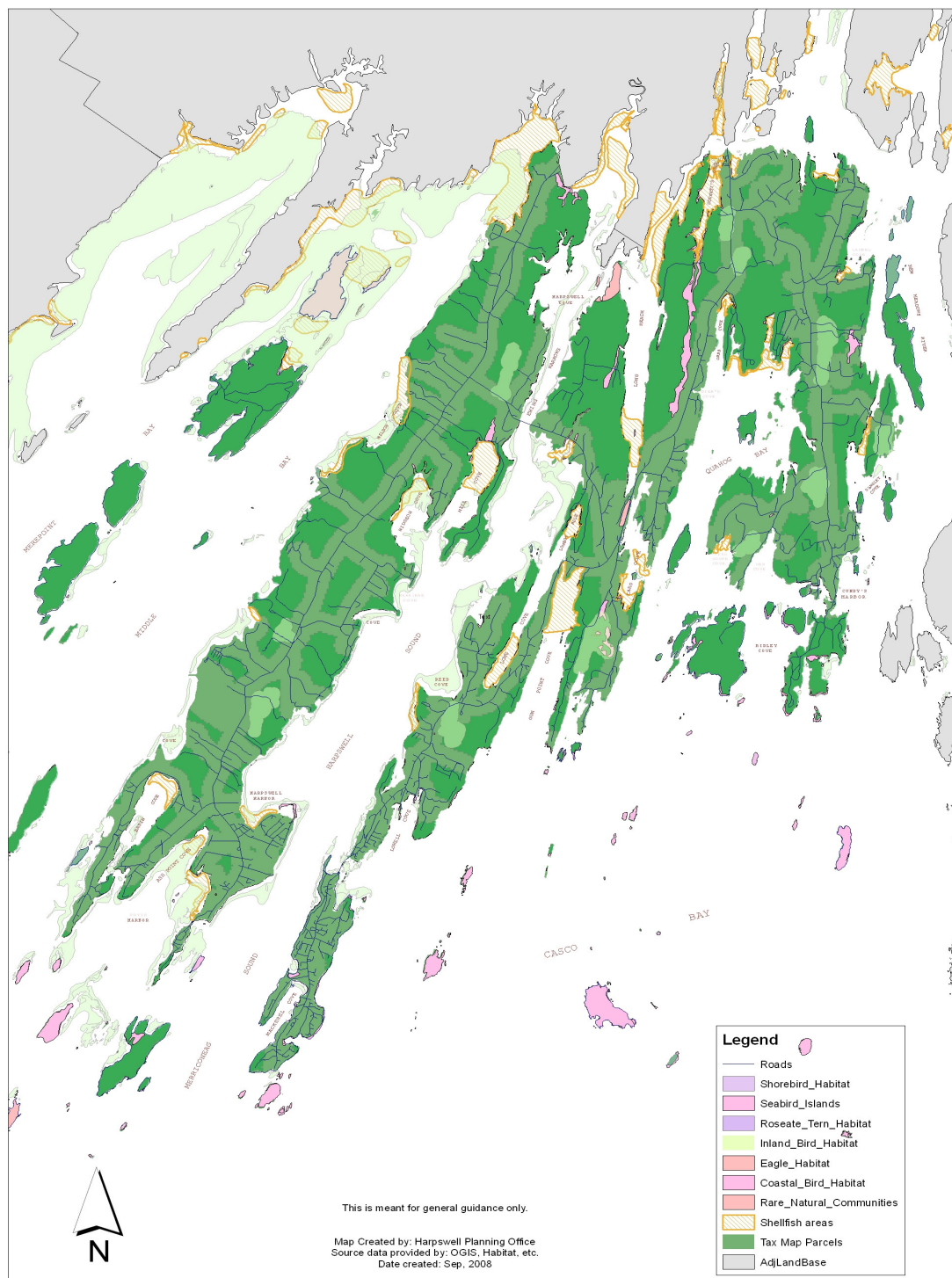
Map 3 – Harpswell Land with Permanent and Limited Protection



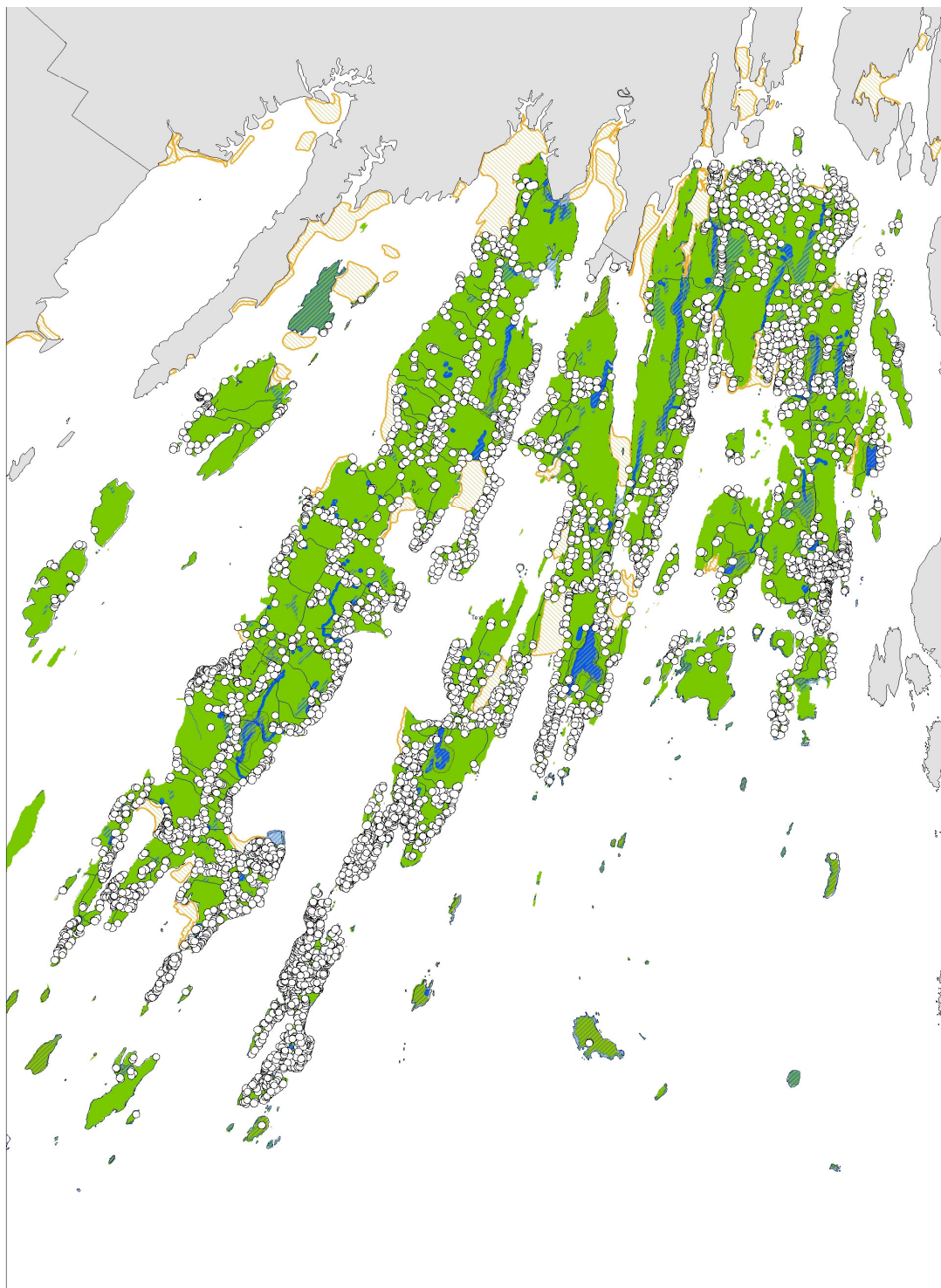
Map 4 – Water Resources



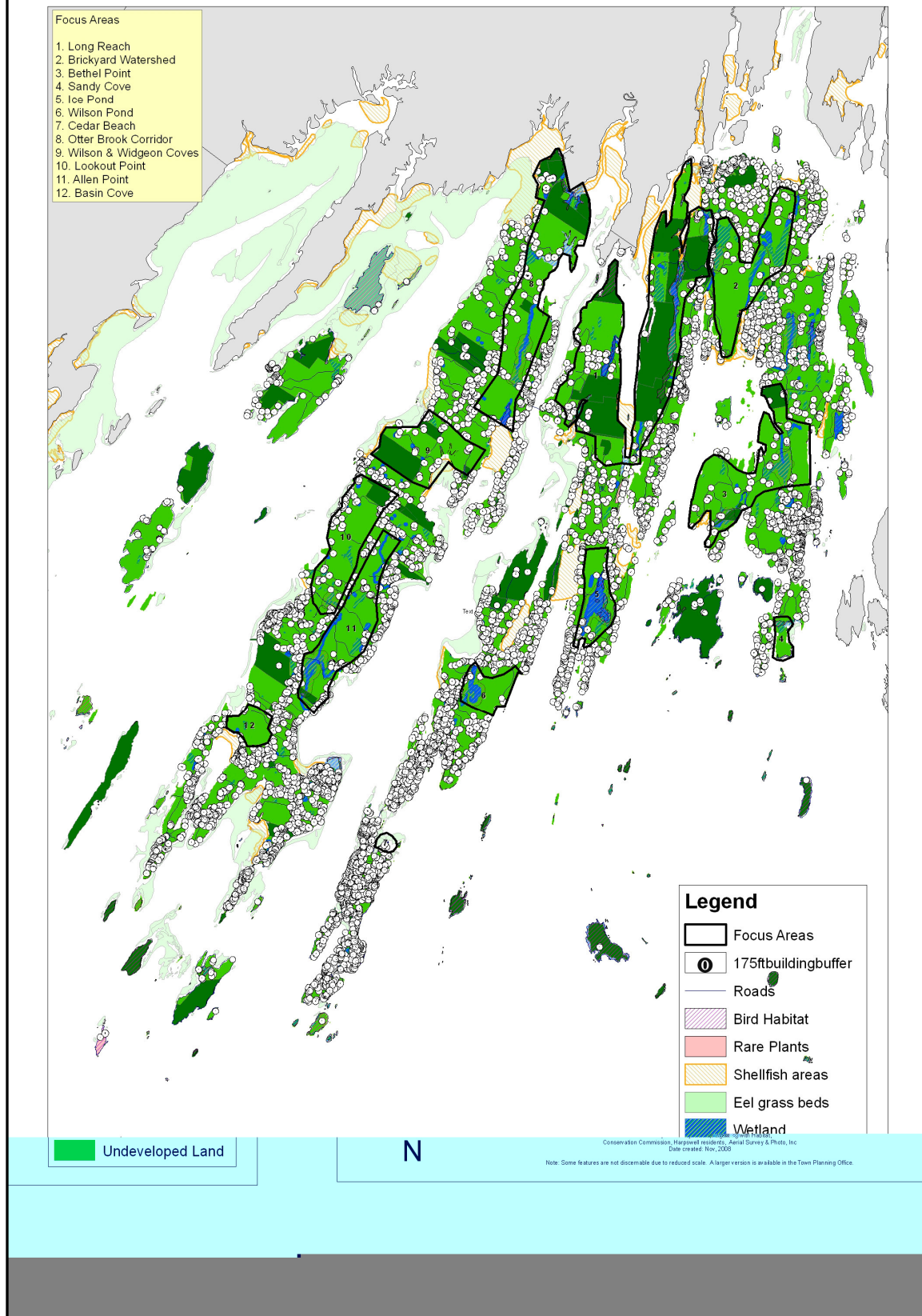
Map 5 – Habitats Only



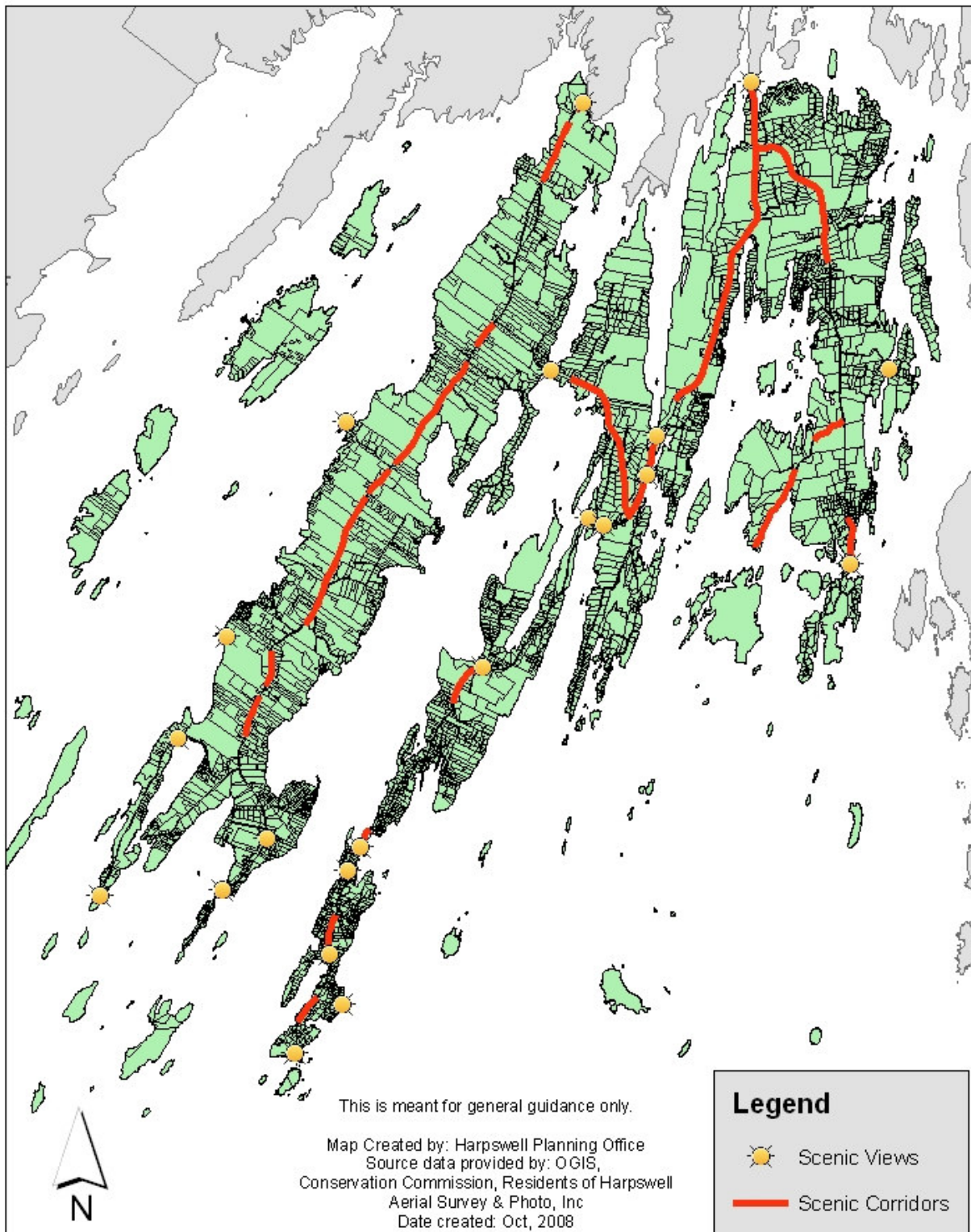
Map 6 – Water Resources, Critical Habitat, and Buildings with 175 Ft. Buffer



Map 7 – Open Space Focus Areas



Map 8 – Scenic Views & Corridors, 2008



Glossary -

Ecosystem: A natural system consisting of plants, animals and microorganisms in an area that function together with all of the non-living factors of the environment.

Eelgrass: The one and only flowering plant of temperate zones that can grow in salt water. (*Zostera marina*). Sometimes people call it “grass wrack” because when its long slender leaves break off and wash up on shore, it forms the “wrack line” by which we judge where the high tide has been.

Focus Area: a large open area of land that includes the water resources necessary to ensure the marine ecology and preserve the health of the fishing industry. The area may include high value habitat critical to federally endangered, threatened and migratory birds that visit or nest in Harpswell and its islands, and high value plant and animal species. In addition to these 12 Focus Areas, **Harpswell’s islands**, especially those with nesting habitat and access for recreation, should be preserved for open space.

Freshwater wetland types:

- Open water wetlands are areas of water where there are no beds of emergent, submerged or floating vegetation.
- Emergent wetlands are characterized by rooted herbaceous and grass like plants which stand erect above the water or ground surface.
- Shrub-scrub wetlands are dominated by shrubs and tree saplings less than 20 feet in height.
- Forested wetlands are dominated by trees taller than 20 feet in height.

Habitat for wildlife: the extent to which a wetland serves as habitat for animals, birds, amphibians and fish typically associated with wetlands and their adjacent uplands; for migrating species; and for species dependent on wetlands at some stage in their life cycles.

Harpswell’s wetlands: While 25% of Maine’s land area consists of freshwater wetlands, less than 2% of Harpswell’s land area does. Studies have shown that development in its adjacent uplands can significantly degrade a wetland’s ability to perform its vital functions. The freshwater wetlands, large and small, that Harpswell does have are consequently more valuable due to their scarcity.

Inter-tidal emergent vegetation: sedges, rushes and riparian shrubs and trees growing in the middle and upper intertidal zones

Nutrient absorption: the potential ability of a wetland to take up nutrients that enter the wetland from surrounding uplands and upstream areas and process them into other forms less dangerous to the quality of downstream resources and downstream water quality.

Open space: land in a predominantly undeveloped condition. It may be preserved or managed in order to maintain the natural, scenic, ecological, cultural, hydrological or

geological properties of the land. In addition, while not strictly open space, the Plan includes areas that provide cultural, historic, and recreational resources that contribute to Harpswell's quality of place and are part of its seafaring and rural heritage.

Production export: the ability of a wetland to produce food for wildlife and export the organic detritus (decayed organic matter) that forms the base of the marine food chain. While coastal marshes obviously have great production export abilities, freshwater wetlands can also play significant roles in land and marine food chains.

Protected open space: property that is protected from development because it has a legal constraint on the property that limits its use to conservation purposes.

Permanently protected open space: property that has limited protection from development because it is owned by the government entity, a non-profit or an educational institution whose mission is to provide services to the community. These properties have varying forms of protection but no legal mechanisms in place to prevent a change in their use as open space in the future.

Quahog Bay was judged particularly vulnerable to nutrient loading (especially nitrogen compounds) from its uplands. The reasons for this include its relatively narrow entrances (which limits flushing), shallowness (warmer water temperatures result in lower oxygen levels), and a high density of septic systems on its shores (nitrogen source). Recommendations for wetlands that drain into Quahog Bay reflect the importance of minimizing any additional nutrient loading into the bay.

Sediment/toxicant retention: the potential ability of a wetland to trap and filter sediments and pollutants in run off water from surrounding uplands and upstream areas.

Stewardship: The practice of carefully managing land use to insure natural systems are maintained or enhanced for future generations. (see footnote 18 under 6E in Part 1 if you want more)

Vernal pool: A vernal pool or seasonal forest pool is a natural, temporary to semi-permanent body of water that typically fills during the spring or fall and is often dry during the summer. A vernal pool may provide the primary breeding habitat for wood frogs, spotted salamanders, blue-spotted salamanders, and fairy shrimp. As of September 1, 2007, vernal pools identified as *significant vernal pool*²⁰ habitat are protected by the Natural Resources Protection Act, (§ 38 MRSA 480-B)

²⁰ Significant vernal pools are defined in Maine as having (1) a state listed threatened or endangered species using it for an important part of its life history and/or (2) there is a notable abundance of vernal pool species, such as blue spotted salamander, wood frog or fairy shrimp.

PART 2 –

PART 2

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